

## 1      ABSTRACT

2      Methods and arrangements are provided that substantially reduce the  
3      requisite amount of data required to conduct postmortem analysis following a  
4      computer failure. The methods and arrangements can be advantageously  
5      configured to allow for rapid online user support for a variety of users, computing  
6      devices, operating systems, applications, and the like. One method includes  
7      determining when to generate a dump file, and generating a dump file by gathering  
8      thread, callstack and thread context information for the running thread, process  
9      identifying information associated with the running thread, and information  
10     identifying the reason for generating the dump file. The resulting dump file is  
11     then stored to a storage medium and accessed during subsequent analysis. The  
12     dump file can be a kernel minidump file that is associated with an operating  
13     system program failure, in which case the running thread is the single thread that  
14     was running when the failure occurred. The kernel minidump file would include  
15     the kernel callstack and the process identifying information that would identify the  
16     process that initiated the single thread. The method is further applicable to non-  
17     operating system programs, wherein a user minidump file is generated by also  
18     gathering callstack information for all running threads, thread context information  
19     for all running threads, and a listing of all loaded modules for the faulting non-  
20     operating system program.